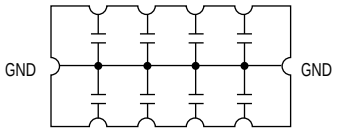
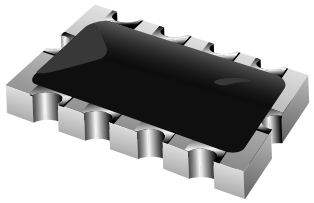
Chip Capacitor Networks

Type: EZANP

Terminal pitch 1.27mm



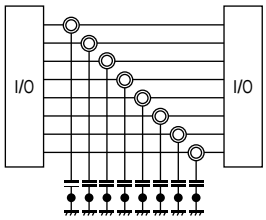


■ Features

- Chip capacitor networks, exclusively developed by Panasonic thick film technology. Bussed eight (8) capacitors in one package (6.4mm x 3.1mm x 0.75mm), half-pitch (0.635mm) spacing for high density automatic placing.
- Superior noise reduction by getting ground terminals, easy patterning (less through hole) for layout
- Superior solderability by Ni+Solder plating unique concave terminal
- ISO-9001 approved

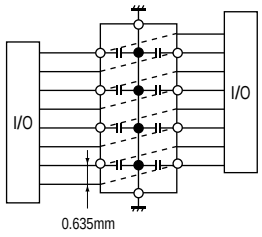
■ Recommended Applications

- Digital equipment such as personal computers, word processors, printers, HDD, PPC, and PDA
- Digital audio and video equipment
- Communications equipment, cordless phones, cellular phones
- Electric musical equipment and digital devices



Conventional Chip Capacitors

No Through Hole



Chip Capacitor Networks EZANP

■ Explanation of Part Numbers

1	2	3	4	5	6	7	8	9	10	11
E	Z	A	N	P	E	1	0	1	M	

1 2 3 — Product Code

Thick Film Noise Suppression and Filtering Components

4 5 — Dimensions and Circuit Configuration

NP 6.4mm x3.1mm 8 Capacitors, common terminal type

6 — Temperature Characteristics

E +20/–55% (–25 to +85 °C)

7 8 9 — Nominal Capacitance

The first two digits are significant figures of capacitance value and the third one denotes the number of zeros following.

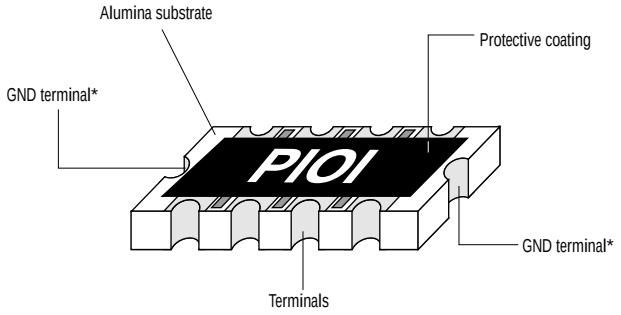
Ex. 101 → 100 pF

10 — Capacitance Tolerance

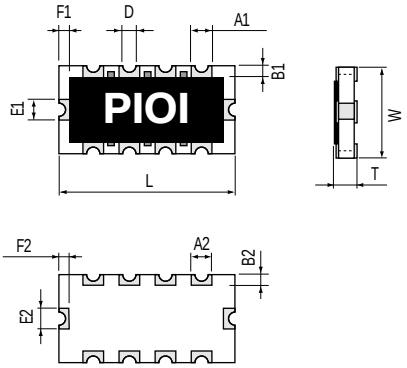
M ±20% (+30/–20% in the case of 22pF

11 — Suffix for Special Requirement

■ Construction

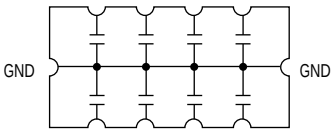


■ Dimensions in mm (not to scale)



■ Circuit Configuration

NP (EZANP Type)



Dimensions

L	W	T	A_1	B_1	E_1	F_1
$6.4^{\pm0.2}$	$3.1^{\pm0.2}$	$0.75^{+0.20}_{-0.10}$	$0.7^{\pm0.2}$	$0.4^{\pm0.2}$	$0.8^{\pm0.2}$	$0.4^{\pm0.2}$

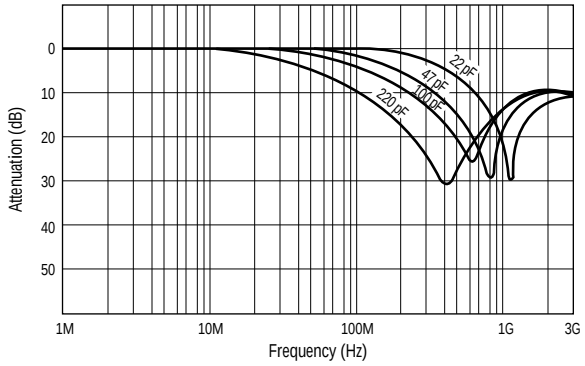
A_2	B_2	E_2	F_2	P	D
$0.56^{\pm0.20}$	$0.4^{\pm0.2}$	$0.8^{\pm0.2}$	$0.3^{\pm0.2}$	$1.27^{\pm0.10}$	$0.4^{+0.1}_{-0.2}$

■ Ratings

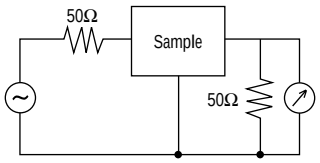
Capacitance values	22 pF, 47 pF, 100 pF, 220 pF (25°C, 1 kHz*, 1 Vrms)
Capacitance tolerance	±20% ($^{+30}_{-20}$% in the case of 22pF)
Temperature characteristic	E characteristic: +20%/–55% (–25°C to +85°C)
Dissipation factor	Less than 2.0% (25°C, 1 KHz, 1 Vrms)
Rated voltage	25 V
Operating temperature range	–25°C to +85°C

* In measuring at 1 MHz, capacitance value and dissipation factor are different.

■ Attenuation Characteristics



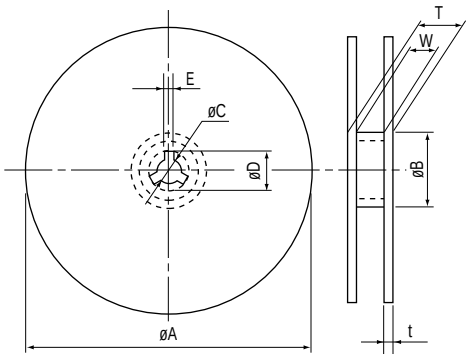
Measurement Circuit



■ Standard Packaging

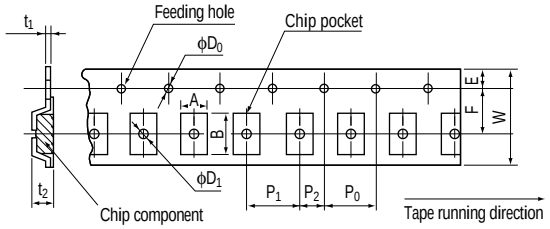
Type	Thickness	Weight/pcs.	Standard Quantity
EZANP	$0.75^{+0.20}_{-0.10}$ mm	52 mg.	4,000 pcs./reel

Standard Reel Dimensions in mm (not to scale)



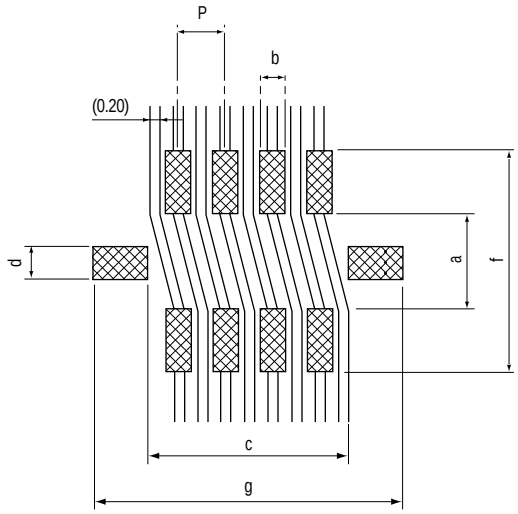
Dimensions							
øA	**øB**	**øC**	**øD**	**E**	**W**	**T**	**t**
$178^{\pm2}$	$60.0^{\pm0.5}$	$13.0^{\pm0.5}$	$21.0^{\pm0.8}$	$2.0^{\pm0.5}$	$13.0^{\pm0.3}$	$15.4^{\pm1.0}$	$1.2^{\pm0.2}$

Embossed Carrier Dimensions in mm (not to scale)



Dimensions					
A	**B**	**W**	**F**	**E**	**P_0**
$3.4^{\pm0.2}$	$6.7^{\pm0.2}$	$12.0^{\pm0.2}$	$5.5^{\pm0.1}$	$1.75^{\pm0.10}$	$4.0^{\pm0.1}$
P_1	**P_2**	**$øD_0$**	**t_1**	**t_2**	**$øD_1$**
$4.0^{\pm0.1}$	$2.0^{\pm0.1}$	$1.5^{+0.1}_{0}$	$0.25^{\pm0.05}$	$1.3^{\pm0.2}$	$1.5^{+0.1}_{0}$

■ Recommended Land Pattern Design



Dimensions						
a	**b**	**c**	**d**	**f**	**g**	**P**
2.1 – 2.5	0.4 – 0.6	5.6 – 5.8	0.4 – 0.6	4.3 – 4.7	7.6 – 8.0	1,27

Land

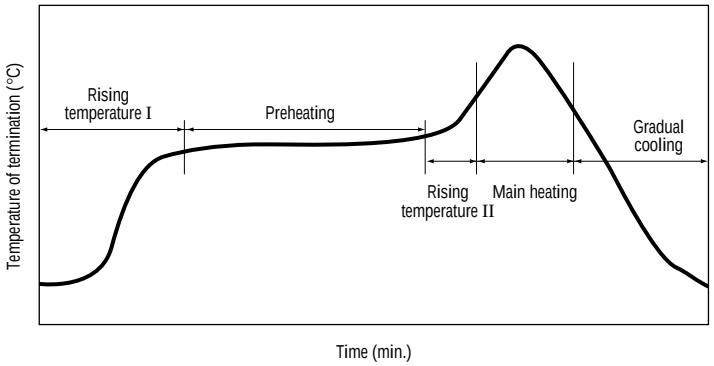
■ Safety Precautions

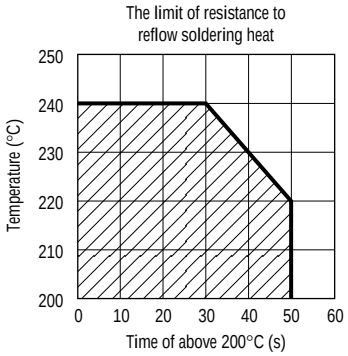
1. Soldering

- Reflow soldering. Please consult us when you use different conditions. Please measure the temperature of terminations and study the solderability of every type of board before actual use.

  (Reflow soldering shall be within two times.)

Rising temperature I	The normal to preheating temp.	30 to 60 s
Preheating	140° to 160°C	60 to 120 s
Rising temperature II	Preheating to 200°C	20 to 40 s
Main heating	*(cf. The limits of resistance to reflow soldering heat)*	
Gradual cooling	200 to 100°C	1 to 4 °C/s





- Ask us about flow soldering.
- Iron soldering: Solder at 280°C max. and 3 seconds max. with the soldering iron tip. The soldering iron tip should not touch the protective coating of the part.
- Use rosin type flux. Do not use high-activity flux (the chlorine content is 0.2wt% or more).
- Allow enough preheating so that the difference of soldering temperature and temperature of the surface of the part is 100°C or less. This temperature difference should be kept in rapid cooling by immersion into solvent.

2. Cleaning

- Residual flux after board washing may cause solder migration. Carefully check the status of board washing. Study type of water-soluble flux, cleaning agent, and drying conditions when water washing is made. Confirm they will not cause any trouble.

3. Miscellaneous

- Take necessary precautions to avoid any abnormal stress caused by board bending.
- Do not use the product in dewy atmospheres.
- Peculiar characteristic of dielectric materials of high dielectric constant may reduce static capacitance by a few percents relative to that at shipment.